

Notice of Allowability

Application No.

09/932,228

Applicant(s)

OHKI, MITSU HARU

Examiner

Tuan V Ho

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☒ The drawings filed on 17 August 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

Art Unit: 2615

1. Claims 1-4 are allowed.

The prior art of record fails to suggest or disclose:

With regard to claim 1, an image processing apparatus for processing images picked up on a plurality of image pickup planes having different distances to a lens, the apparatus comprising: first computing means for computing weights of said plurality of images acquired by said acquiring means; second computing means for computing averages of said plurality of images acquired by said acquiring means; and image creating means for creating an optimum image of said target object by obtaining a weighted average based on said weights computed by said first computing means and on said averages of said plurality of images computed by said second computing means.

With regard to claim 3, an image processing method for use with an image processing apparatus for processing images picked up on a plurality of image pickup planes having different distances to a lens, the method comprising the steps of: firstly computing weights of said plurality of images acquired in said acquiring step secondly computing averages of said plurality of images acquired in said acquiring step; and creating an optimum image of said target object by obtaining a weighted average based on said weights computed in said first

Art Unit: 2615

computing step and on said averages of said plurality of images computed in said second computing step.

With regard to claim 4, a storage medium which stores a computer-readable program for use with an image processing apparatus for processing images picked up on a plurality of image pickup planes having different distances to a lens, said program comprising the steps of: firstly computing weights of said plurality of images acquired in said acquiring step; A storage medium which stores a computer-readable program for use secondly computing averages of said plurality of images acquired in said acquiring step; and creating an optimum image of said target object by obtaining a weighted average based on said weights computed in said first computing step and on said averages of said plurality of images computed in said second computing step.

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Itsumi et al discloses a video camera that comprises a vibrating image processing operation.

Paik et al discloses a digital focusing method that includes a step of estimating edge direction of each sub-image.

Art Unit: 2615

Dougherty discloses a camera that comprises multiple image sensors located at different optical path lengths from the focusing means.

Dowski discloses an automatic focusing device that comprises Z-transformation circuit.

Subbarao discloses an electronic camera that includes a method of determining a set of unknown parameters of linear shift-invariant system.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (703) 305-4943. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen, can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Application/Control Number: 09/932,228

Page 5

Art Unit: 2615



TUAN HO

Primary Examiner

Art Unit 2615